



**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/869,109	06/04/97	CHESSER B	R154-9245

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IN11/1208

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EXAMINER

1721

ART UNIT

PAPER NUMBER

12/08/98
DATE MAILED

**Please find below and/or attached an Office communication concerning this application or
proceeding.**

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/869,109

Applicant(s)
Chesser et al.

Examiner
Kelly, C.H.

Group Art Unit
1721



☒ Responsive to communication(s) filed on Sep 21, 1998

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-3, 7, 9, 14-16, 21-23, 26, 27, and 29-65 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-3, 7, 9, 14-16, 21-23, 26, 27, and 29-65 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 7, 9

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 3, 7, 9, 14, 15, ¹⁶21, 22, 23, 26, 27, 29, 30-37, 38-41, 42-51, 52-64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over DD 240559 in view of Mondshine, U.S. pat. No. 4,175,042 in view of House et al., U.S. pat. No. 4427556.

The DD reference discloses adding a starch to a brine solution of NaCl and further adding MgCl₂ to the solution. The reference does not refer to the solutions as precursor and final. However, the starch is added to a brine and the final brine, by addition of Mg salt, is subsequently formed. The DD reference does not mention that the rheology would be increased. The reference does say that the composition prevents fluid loss. The DD reference does not speak specifically to calcium chloride and calcium bromide as the brine components. However, the well known components of calcium chloride and calcium bromide are used in brines and said to form dispersions of high densities as shown by House, columns 5, 8 and 9. House teaches calcium bromide/zinc bromide with particles for dispersions with subsequent addition of calcium carbonate, resulting in a final brine. It would be well within the skill of the ordinary artisan to make the polymer dispersion using calcium chloride and calcium bromide because both are known as components in brines as well in slurries to which starch has been added and used in well drilling operations. The use of starches in brines is known to increase viscosity and rheology as shown by

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House. See column 2 and claims 15-18. House discloses starches added to heavy brines of calcium bromide and calcium chloride having a positive effect on rheology. The hydration does not occur until after the CaCO_3 is added. See column 14 in the example. House also teaches Mondshine teaches the use of starch in brines as a fluid loss control agent in columns 6 and 7. Mondshine teaches adding the starch to a suspension of brine particles. Mondshine includes calcium chloride and calcium bromide as the particular brines. It would have been obvious to make a polymer dispersion of calcium bromide and chloride brines containing starch as fluid loss control agents because the combined references teach the method of forming a polymer dispersion in brines and the specific brines (calcium chloride and calcium bromide) for use as fluid loss control agents and rheology increasers.

Applicant's arguments filed September 21, 1998 have been fully considered but they are not persuasive.

Applicant argues that there is nothing in Mondshine or House which provides motivation to use multivalent cations of Ca or Mg rather than sodium or any of the others listed by Mondshine. Mondshine teaches that all the salts are known and can have the same effect on the drilling fluids and subsequent use of the fluids. See column 2. The sodium salt was used in Mondshine only because of its cheap cost. The reference does not say that any of the other salts mentioned are not as effective otherwise. Calcium chloride and calcium bromide are even claimed in claim 1 of Mondshine. House offers, in column 14, the use of $\text{CaBr}_2/\text{Zn Br}$ and CaCO_3 , as multivalent metals.

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Applicant argues that DD, Mondshine nor House mentions prehydration or that the dispersion is hydrated until addition to the final brine. At high density levels, hydration is not likely to occur because of the amount of water available. House teaches at column 14 the addition of multivalent salts to polymers, with subsequent addition of CaCO_3 . The samples were then allowed to hydrate. This suggests that hydration did not occur during the initial addition of the salts to the polymer. House teaches dispersions which have high densities (greater than 11 lbs/gal) that when added to brines control rheology and fluid loss. This is what applicant claims. That applicant's dispersion is not hydrated until addition to final brine is not unobvious over the references combined since House teaches hydration at the final addition as well.

Applicant argues that House teaches solvating agents so that the brines could be prepared off site. This statement does not overcome the fact that the brines have the same end result as applicant's brines. Also, applicant does not claim that the brines are prepared downhole, only that they are effective downhole. The reference composition is also effective downhole. The rejections made previously over DD '559, House and Mondshine are therefore maintained.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CAR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CAR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kelly whose telephone number is (703) 308-0449. The examiner can normally be reached on Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharon Gibson, can be reached on (703) 308-4552. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

C.H. Kelly
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CH Kelly